FACT BRIEF

Sandy Streetlights

BACKGROUND

In the early 1990's Sandy City public officials had a vision to install street lighting on all public roadways within city limits to increase public safety, provide a more comfortable nighttime environment, and be visually appealing. This concept was known as "City of Lights" and approved by voters in 1995. Since then, the city has installed street lighting throughout Sandy City carrying out its commitment to provide street lighting on all public roadways. This is done through capital improvement projects and development projects.

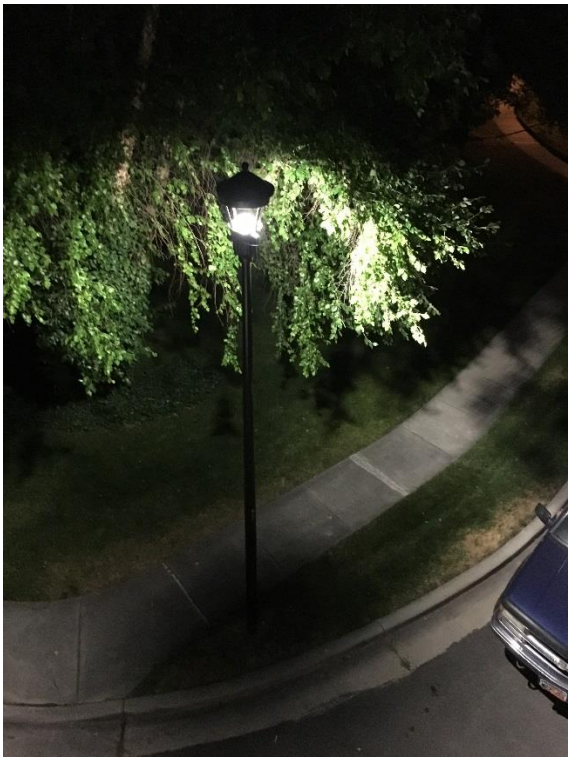
FACTS

- The city currently has two types of lights: older high-pressure sodium ("HPS"), and newer light emitting diodes ("LEDs"). HPS lights use much more electricity to generate light when compared to LED lights. HPS lights also generate a lot of heat. LED lights use less wattage than HPS lights, which leads to decreased power costs.
- Sandy City's current streetlight standards are full cut off LED, which comply with the International Dark-Sky Association. Dark sky compliance does not mean no lights. Dark sky light compliant cities have street lights with shielding of the light so that it is not directed upward, which is considered "light pollution" that unnecessarily lights up parts of the landscape and sky.
- Sandy City currently has approximately 8,500 streetlights throughout the city. About 1,700 streetlights are LED and 6,800 are HPS.
- About $10M is needed to upgrade the remaining HPS lights to the city's LED high efficiency and dark sky standard.
- Power cost for a HPS fixture is $4.00 per light per month versus $1.15 per light per month for an LED fixture. If the remaining 6,800 HPS lights are replaced with LEDs, city will save $34.20 per light per year, which is approximately $240,000 per year.
- Approximately $10M is needed for 1,500 to 2,000 new streetlights for streets that do not have lights. Additional streetlights are often required as more neighborhoods annex into the City.
- Current street light capital improvement funding for new lights is $104,000. $1M annually is needed complete improvements in 20 years.

"DARK SKY" Lighting and Color

- Dark sky compliance does not mean no lights. Dark sky light compliant cities have street lights with shielding of the light so that it is not directed upward, which is considered "light pollution" that unnecessarily lights up parts of the landscape and sky. This is a waste of energy. Some studies show light pollution can have negative impacts to wildlife and humans.
- Light pollution also makes it hard or impossible to see stars, planets and other nighttime sky features. By shielding the light only a small percentage of light escapes upward. The newer LED lights also allow some directing of light away from homes or areas where it is desired to remain dark, such as cutting the glare into a nearby bedroom window at night.
- Another area of interest in lighting is the color of the light. The current standard color of new Sandy City lights is 4,000 Kelvin. It is a white light. The 4,000 kelvin color is the generally accepted color by most state and local governments. Some studies state 4,000 Kelvin may be safer as the eye responds quicker to the 4,000 kelvin. True colors and hidden features of the white light are considered better for public safety to expose hidden figures in the shadows as well as identifying specific people or vehicles in security video footage. The 4,000 kelvin is the standard by which UDOT uses along with most other cities in Utah.
- The 3,000 Kelvin is more amber and is the suggested color to use by the Dark Sky Association. Some cities use 3,000 kelvin in residential areas. Most of Sandy's old "Acorn" style lights are 3,000 kelvin.
- 2,700 kelvin is a more yellow color but poor color rendition. 2,700 kelvin is used in wildlife areas such as Zion National Park.
- 5,000 kelvin temperature is a more blueish color, and not used often in roadway applications.

Pictures of old Sandy Acorn Fixtures



Pictures of new Sandy Standard LED Fixtures